

CLAIMS

WHAT IS CLAIMED IS:

1. An article for medical applications comprising: a double Jacquard - double needle
5 bar Raschel warp knitted diamond-shaped open net multilayered fabric pouch.
2. The article of claim 1 wherein the multilayer fabric pouch comprises:
a first discrete diamond shaped net fabric layer,
a second discrete diamond shaped net fabric layer,
wherein the first and second net fabric layers together are integrally secured using
10 Jacquard knit stitches
3. The article of claim 1 wherein the pouch comprises open and closed ends wherein,
the open end comprises Jacquard selected joining points along a curvilinear shaped line.
4. The article of claim 3 further comprising supplemental laid-in yarns.
5. The article of claim 2 wherein the fabric layers comprise a continuous multi-
15 filament textured synthetic polymer polyester yarn.
6. The article of claim 2 wherein the fabric layers comprise a continuous
multifilament textured polyester yarn in a range of between about 60 and about 90 denier
in size, and a filament count in a range of between about 30 and about 36 denier.
7. The article of claim 2 wherein the fabric layers comprise a diamond shaped open net
20 structure comprising a durable four-course repeat Sandfly net stitch construction.
8. The article of claim 2 wherein an uppermost distal open end section of the knitted
pouch article comprises a shorter yarn runner so as to provide a zone comprised of a
more stabilized and denser fabric than the main body of the pouch article.

9. The article of claim 2 wherein the first and second discrete fabric layers are integrally knitted together in uninterrupted correct knitting sequence at predetermined or precise Jacquard electronically selected joining points.

10. A heart surrounded by an article of claim 2.

5 11. A method of knitting a double Jacquard - double needle bar Raschel warp knitted diamond shaped open net multi-layered fabric pouch shaped article formed with a series of knitted courses comprising:

knitting a first discrete diamond shaped net fabric layer and a second discrete diamond shaped net fabric layer;

10 joining the layers; and

forming an essentially tubular sleeve pouch that is shaped and closed at one end , and open at the other.

12. The method of claim 11, wherein the joining step further includes joining the layers utilizing a Jacquard stitching method of joining each of said discrete first and
15 second net fabric layers together, securing integrally within the knit structure, and forming an essentially tubular sleeve pouch that is shaped and closed at one end , and open at the other.

13. The method of claim 11 wherein, an open end of the essentially tubular multi-layered fabric article is provided at the top uppermost distal end of the article with the closed end
20 of the article comprising Jacquard selected joining points along a curvilinear shaped line provided at the bottom most portion of the article as it is progressively knitted in the warp or wale-wise direction.

14. A method of knitting a multi-layered fabric pouch article according to claim 11 wherein, an open edge of the pouch shaped article is provided on one side only of the

essentially tubular multi-layer fabric as it is knitted with a portion of the opposite edge integrally and seamlessly knitted in a continuous manner joining the said first discrete fabric layer to the said second discrete fabric layer closing that edge portion and is continuously connected to a series of Jacquard selected integrally knitted joining points
5 along a curvilinear line essentially closing the pouch edges continuously up to and including the edges of the open side of the pouch shaped article as it is progressively knitted in the warp or wale-wise direction.

15. A method of knitting a multi-layered fabric pouch article according to claim 11 wherein, the free and open edges of the pouch shaped article are further stabilized and
10 reinforced with supplemental laid-in yarns so as to provide a finished knitted selvedge treatment at the top or uppermost open edges of the pouch shaped article during fabric formation

16. A method of knitting according to claim 11 wherein the series of knitted courses comprise a continuous multi-filament textured synthetic polymer polyester yarn.

15 17. A method of knitting according to claim 11 wherein, each of said first and second discrete warp knitted fabric layers comprise continuous multifilament textured polyester yarn in a range of between about 60 and about 90 denier in size, and a filament count in a range of between about 30 and about 36 denier.

18. A method of knitting according to claim 11 wherein, each of the said first discrete
20 and second discrete fabric layers are knitted using a diamond shaped open net structure comprising a durable four-course repeat Sandfly net stitch construction.

19. A method of knitting a fabric according to claim 11 wherein, the uppermost distal open end section of the knitted pouch article is formed using a tighter, essentially shorter yarn runner feed length without changing knitted stitch construction so as to provide a

zone comprised of a more stabilized and denser fabric quality than that of the essentially main body of the pouch article, and serving as a separation point for both cutting into individual pouch articles, as well as a denser reinforced area.

20. A method of knitting the fabric according to claim 11 wherein the said first and
5 second discrete fabric layers are integrally knitted together in uninterrupted correct knitting sequence at precise Jacquard electronically selected joining points eliminating the need for conventional final stage sewing operations.

21. A method for treating heart disease comprising surrounding a heart with an article of claim 1.

10 22. A double Jacquard - double needle bar raschel warp knitted diamond shaped open net multi-layered fabric pouch sized, shaped and constructed for use as a medical support net structure.

23. The fabric of claim 22 wherein the multi-layer fabric pouch comprises: a first discrete diamond shaped net fabric layer, second discrete diamond shaped net fabric
15 layer, wherein the first and second net fabric layers together are integrally secured using Jacquard knit stitches.

24. The fabric of claim 23 wherein the fabric layers comprise a continuous multi-filament textured synthetic polymer polyester yarn.

25. The fabric of claim 23 wherein the fabric layers comprise a continuous
20 multifilament textured polyester yarn in a range between about 60 to about 90 denier in size, and a filament count in a range between about 30 to about 36.

26. The fabric of claim 23 wherein the fabric layers comprise a diamond shaped open net structure comprising a durable four-course repeat Sandfly net stitch construction.

27. The fabric of claim 23 wherein an uppermost distal open end section of the

knitted pouch article comprises a shorter yarn runner so as to provide a zone comprised of a more stabilized and denser fabric than the main body of the pouch article.

28. The fabric of claim 23 wherein the first and second discrete fabric layers are integrally knitted together in uninterrupted correct knitting sequence at precise Jacquard electronically selected joining points.

29. The fabric of claim 23 wherein the multilayer fabric pouch is sized, shaped and constructed to support a heart.

30. The fabric of claim 22 wherein the pouch comprises open and closed ends wherein, the open end comprises Jacquard selected joining points along a curvilinear shaped line.

31. The fabric of claim 22 further comprising supplemental laid-in yarns

32. A biocompatible Raschel warp knit net construction single layer fabric comprising a plurality of differing zones intermittently knitted and alternating from a standard quality and stitch length to a tighter quality with a shorter stitch length.

33. The fabric of claim 32 further comprising: supplemental laid-in yarns.

34. The fabric of claim 33 formed from a continuous multi-filament textured synthetic polymer polyester yarn.

35. The fabric of claim 32 formed from a continuous multifilament textured polyester yarn in a range of between about 60 and about 90 denier in size, and a filament count in a range of between about 30 and about 36 denier.

36. The fabric of claim 32 wherein the fabric comprises a diamond shaped open net structure comprising a durable four-course repeat Sandfly net stitch construction.

37. A medical article formed from the fabric of claim 32.

38. A method of making the fabric of claim 1 comprising the steps of: knitting a

single layer fabric in a Raschel warp knit net construction, wherein the fabric is capable of being used for forming a biocompatible medical construction therewith.

39. The method of claim 38, wherein the single layer fabric is a biocompatible Raschel warp knit net construction single layer fabric comprising a plurality of differing
5 zones intermittently knitted and alternating from a standard quality and stitch length to a tighter quality with a shorter stitch length.

40. The method of claim 39 further including the step of providing supplemental laid-in yarns.

41. The method of claim 40 wherein the knitting step further includes forming the
10 fabric from a continuous multi-filament textured synthetic polymer polyester yarn.

42. The method of claim 38 formed from a continuous multifilament textured polyester yarn in a range between about 60 to about 90 denier in size, and a filament count in a range between about 30 to about 36 denier.

43. The method of claim 38 wherein the fabric comprises a diamond shaped open net
15 structure comprising a durable four-course repeat Sandfly net stitch construction

44. A method of forming a medical article comprising the steps of: knitting a biocompatible single layer fabric having a diamond shaped open net structure comprising a durable four-course repeat Sandfly net stitch construction and forming the medical article therewith.